

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028421**Date Inspected:** 19-Sep-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

<b>CWI Name:</b>	Salvador Merino and Steve Jensen			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>	
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	SAS OBG		

**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG 13E-E2.3-@3910 drop-in top deck plate inside, QA randomly observed ABF/JV qualified welder Mike Jimenez continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder preheated the repair area and its vicinity to >225°F using propylene gas torch prior excavation and then ground smooth the groove of the excavation. After its completion, ABF QC Salvador Merino performed Magnetic Particle Testing (MT) on the removal of the defects with no relevant defect noted during the test. This QA also performed same test verification and noted same result.

One dedicated ABF personnel was noted using propylene gas torch to preheat the repair area and its vicinity to 325°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder Mike Jimenez was observed manually welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. Welder Mike Jimenez was noted welding five (5) second time and one (1) fourth time repairs at various Y locations listed below. During welding, ABF QC Salvador Merino was noted monitoring the welder's welding parameter with measured working current of 128 amperes on the 3.2mm diameter E7018H4R electrode. Each time the welder has completed one repair, an ABF personnel was noted performing the post weld heat treatment (PWHT) using the propylene gas torch and verifying the heat using the 450°F for one hour as

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required. The ABF personnel was also noted continuously preheating the repair area and its vicinity to 325°F as the welder goes to another repair. ABF welder Mike Jimenez has completed from inside the five second time and one fourth time repairs listed below;

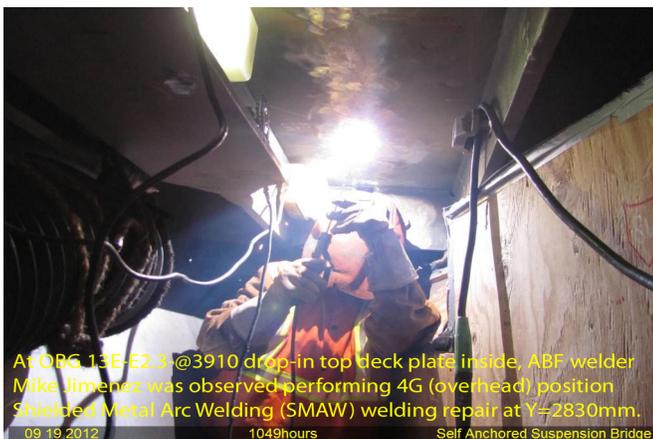
Y-location	Length	Width	Depth	RWR#	Remarks
1. 0mm	170mm	25mm	12mm	201209-093	R2- completed.
2. 340mm	80mm	25mm	12mm	201209-094	R2- completed.
3. 525mm	100mm	30mm	12mm	201209-095	R2- completed.
4. 1410mm	70mm	25mm	10mm	201209-096	R2- completed.
5. 2830mm	70mm	20mm	11mm	201209-097	R2- completed.
6. 1780mm	70mm	20mm	10mm	201209-100	R4- completed.

FW Spencer:

At OBG 6E location Panel Point PP31 to PP35 grid line E5, this QA randomly observed FW Spencer qualified welder Damian Llanos continuing to perform Complete Joint Penetration (CJP) 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on the field splice butt joint of 2.5" and 4" domestic water and compressed air lines respectively. The system lines being welded are field weld joints along the grid line of E5 of the OBG. The welder was noted welding the root pass with 3/32" diameter E6010 electrode and followed by fill pass to cover pass using 3/32" diameter E7018H4R electrode implementing Caltrans approved procedure FW Spencer WPS 1-12-1. The welder was noted preheating and removing the moisture of the joint using a portable propane gas torch prior welding. During welding, ABF QC Steve Jensen was noted monitoring the parameters of the welder. At the end of the shift, the welder has completed the welding of the splice butt joints at the following;

Line Service Line/Pipe Size Panel Point Location Joint Designation

1. Domestic Water 2 1/2" 31 Northeast 15/2.5/31/NE
2. Compressed Air 4" 35 Northeast 17/4/35/NE



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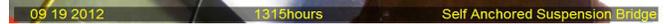
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At OBG location panel point PP31 grid line E5 outside, FW Spencer welder Damian LLanos was observed performing 6G (all position) Shielded Metal Arc Welding (SMAW) welding root pass to cover pass on field-splice 2 1/2" diameter domestic water line.



At OBG 13E-PP124.5-E5 deck access hole inside, ABF welder Wai Kit Lai was observed performing 4G (overhead) position Shielded Metal Arc Welding (SMAW) welding repair on welded access hole.



## Summary of Conversations:

No significant conversation occurred today.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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**Inspected By:** Lizardo, Joselito

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer